

Transponder

G_70633ZA

Description

The system utilizes the frequencies 128 kHz and 64 kHz, which are lower than the long-wave radio range.

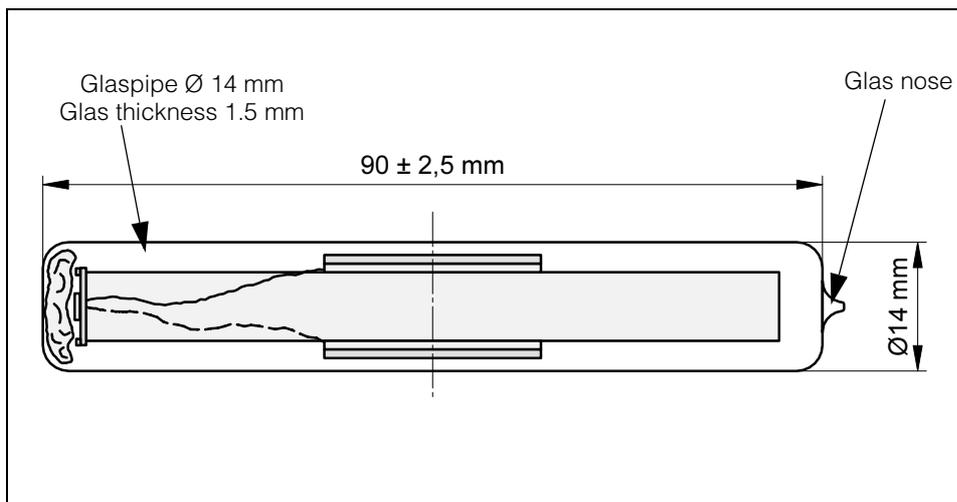
The transmitting antenna of the reading unit supplies the transponder with energy by using an alternating field of 128 kHz. This induces a voltage within the coil of the transponder, which generates a current that is sufficient power supply for the micro chip. Now the transponder transmits its code in full duplex mode at half this frequency back to the reading antenna. A normal reading cycle including all security checks is approximately 8 ms.

The system's operability is guaranteed through fluid, gaseous as well as solid material. However, if mounted directly on or within metal, the transponder's reading distance is influenced.



Read-Write Transponder (RW)

The Read-Write Transponders are equipped with an EEPROM in which the code is stored. The EEPROM may be rewritten up to more than 100.000 times. It has eight blocks of 32 bit each. Six of these blocks are available for user data.



Applications (Examples)

- ♦ Storage Management
- ♦ Material Handling
- ♦ Logistics Systems
- ♦ Security Engineering
- ♦ Conveyor System
- ♦ Personal Identification

Mounting Instructions

Observe the required minimum distances from an iron free area (see the box at the bottom), as the influence on positioning accuracy and range is dependent upon size and distance of iron parts. For the same rea-

son, the transponder should be mounted as vertically as possible. In contrast, it is not of any importance for range and function which end of the transponder is uppermost.

Transponder

G_70633ZA

Mounting in very solid ground (e. g. concrete)

- No additional protection tube is required.
- Vertical alignment is required, otherwise there will be positioning errors.
- The transponder should be sealed (e. g. with a two component epoxy resin).
- To protect the transponder use either a covering cap or apply an epoxy resin layer (at least as thick as the hole diameter). The drilled hole mouth should be wide enough so that the cover cannot be pressed on to the transponder.

should be applied. The drilled hole mouth should be wide enough so that the cover cannot be pressed onto the transponder.



Range and accuracy of positioning are influenced by:

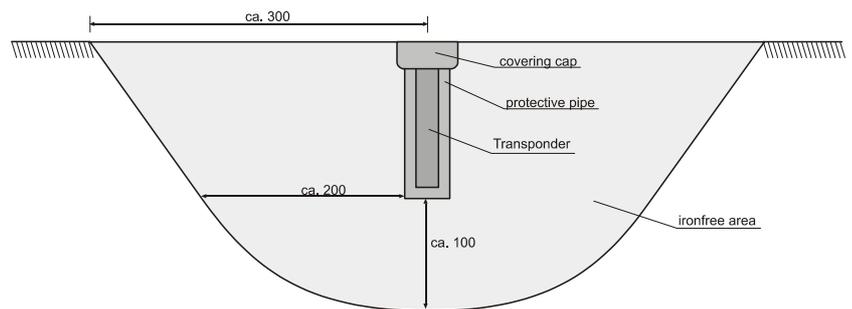
- Any large metal pieces (sheets) on the ground.
- Proximity of any floor reinforcement.
- Inductive loops, as they are created e. g. by steel building mats, have a greater influence. Individual metal poles have little effect. Those may partially be within the ironfree area (see box below).

Mounting in tough/viscous material (e. g. tar)

- Protective casing is required (e.g. tube of fibre-glass reinforced plastic). Choose the diameter according to the load requirements.
- Place the transponder vertically (otherwise a positioning error is generated), loose or embedded in foam.
- To protect the transponder either a covering cap or an epoxy resin layer (at least as thick as the hole diameter)

The following environmental conditions have no effect on the system:

- Snow, ice, water.
- Oil, tar, earth, dirt, etc.



Minimum iron free distances around the transponders (in mm)

Technical Data

- Dimensions	ø14 mm x 90 mm length (±2,5 mm)
- Weight	40 g
- Material	glass encapsulated
- Operating Temperature [°C]	-20 to +50
- Storage Temperature [°C]	-20 to +50
- Protection Class	IP 67
- Code	EEPROM
- Data	120 Bit useful data
- Reading Distance	depending on the reading antenna. Nominal reading distance with Antenna HG 98760: 90 mm
- Writing Distance	depending on writing device